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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
09/162,563	09/29/98	DOORN	D 46-41

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QM41/0428

EXAMINER	
WELCH, G	
ART UNIT	PAPER NUMBER
3741	3

DATE MAILED: 04/28/99

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Office Action Summary

Application No.

09/162,563

Applicant(s)

Van Doorn et al.

Examiner

Gary L. Welch

Group Art Unit

3741

☒ Responsive to communication(s) filed on Sep 29, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-24 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-4, 8-12, and 17-19 is/are rejected.

☒ Claim(s) 5-7, 13-16, and 20-24 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Sep 29, 1998 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

Applicant has not given a post office address anywhere in the application papers as required by 37 CFR 1.33(a), which was in effect at the time of filing of the oath or declaration. A statement over applicant's signature providing a complete post office address is required.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Reference number 31 specified on page 14, line 17 is not provided in the drawings.

Correction is required.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of discs and the plurality

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of radial bristles must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Specification

5. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

6. The disclosure is objected to because of the following informalities:

Page 3, lines 8, 14, 17 and 21: Change "USDA" to --US--.

Page 4, lines 8 and 16: Change "USDA" to --US--.

Appropriate correction is required.

Claim Objections

7. Claims 5-7, 13-16 and 20-24 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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9. Claims 11 and 12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not disclose a transfer cylinder comprising a plurality of discs mounted on a common shaft and spaced apart axially nor a transfer cylinder comprising a plurality of radial bristles disposed on the outer surface of the cylinder. One of ordinary skill in the art would not be able to make or use the invention as disclosed without first knowing how the plurality of discs and bristles are mounted on a common shaft and spaced apart axially to sufficiently allow air to pass between the discs and bristles while preventing desirable fibrous material from passing there between.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 5, 7, 12, 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 5, 7, 12, 14 and 15, the use of the term "or" is indefinite because it does not particularly define applicant's invention.

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Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-4 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Day.

Day discloses the invention as claimed. Day teaches a fiber cleaning apparatus (Figure 1) comprising an air stream (Figure 1, air inlet flue, lint inlet flue) entering the apparatus in an air duct (Figure 1) at conveying velocities and fiber-to-air mass ratios sufficient to prevent agglomeration of the individual fiber masses, a revolving cylinder 18 with fang type teeth on its periphery capable of holding fiber on the teeth, the air duct terminating adjacent the surface of the revolving cylinder 18, means to substantially completely separate the conveying air from the desirable fibrous material and means (19a-19e) adjacent the periphery of the revolving cylinder 18 to cause foreign matter to be separated from the fiber. The saw cylinder with interposed spacers (Col. 4, lines 19-20) allows air to flow in between the blades and teeth thereby separating the conveying air from the desirable fibrous material. The applicant has not described how or by what means a velocity or fiber to air mass ratio that would prevent agglomeration of the individual fiber masses.

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With regard to claim 2, the cylinder is constructed of annular blades with interposed spacers (Col. 4, lines 19-20). The conveying air is allowed to pass therethrough and is exhausted from the cylinder 18.

With regard to claim 3, the invention is disclosed as stated above.

With regard to claim 4, the streamer plate 19 has a lower surface approximately tangent to and in close proximity to the upper surface of the revolving cylinder 18, an upper surface joining the lower surface in an acute angle and a leading edge facing against the direction of rotation of the revolving cylinder 18 to comb back and impale the fiber firmly onto the fang teeth of the revolving cylinder 18.

With regard to claims 17-19, the invention is disclosed as stated above.

14. Claims 1 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Doorn et al. '047

Van Doorn et al. discloses the invention as claimed. Van Doorn et al. teaches a fiber cleaning apparatus (Figure 2) comprising an air stream (Figure 2) entering the apparatus in an air duct (Figure 2) at conveying velocities and fiber-to-air mass ratios sufficient to prevent agglomeration of the individual fiber masses, a revolving cylinder 37 with fang type teeth on its periphery capable of holding fiber on the teeth, the air duct terminating adjacent the surface of the revolving cylinder 37, means to substantially completely separate the conveying air from the desirable fibrous material and means 41 adjacent the periphery of the revolving cylinder 37 to cause foreign matter to be separated from the fiber. The saw cylinder allows air to flow in

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between the blades and teeth thereby separating the conveying air from the desirable fibrous material. The applicant has not described how or by what means a velocity or fiber to air mass ratio that would prevent agglomeration of the individual fiber masses.

With regard to claim 8, transfer cylinder 32 allows air flow therethrough while preventing fibrous material penetration inwardly of its periphery. Cylinder 32 is a condenser cylinder (Col. 3, lines 21-23) which are well known in the fiber processing art to have perforated surfaces for allowing air to pass therethrough. The recitation "close proximity to said rotating cylinder" in lines 5-6 is not well defined. The cylinder 32 is in close proximity to the revolving cylinder 37.

With regard to claim 9, the transfer cylinder 32 rotates in the same angular direction as the revolving cylinder 37 (Figure 2).

With regard to claim 10, the invention is disclosed as stated above.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Doorn et al. '047 in view of Day.

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Van Doorn et al. discloses the invention substantially as claimed above. However, Van Doorn et al. does not disclose a transfer cylinder comprising a plurality of discs mounted on a common shaft and spaced apart axially. Day teaches a revolving saw cylinder 18 comprising a plurality of annular saw blades with interposed spacers (Col. 4, lines 19-20). Since it is well known in the fiber processing art that cylinders are comprised of a plurality of discs mounted on a common shaft and spaced apart axially, it would have been obvious to one of ordinary skill at the time the invention was made to replace the transfer cylinder 32 of Van Doorn et al. with a transfer cylinder comprising a plurality of discs mounted on a common shaft and spaced apart axially as taught by Day in order to provide a cylinder with a strong rigid tubular core while permitting air to pass therethrough (Col. 4, lines 13-20) in order for fibers to easily be doffed from the cylinder. The cylinder of Day is a transfer cylinder since it inherently transfers fiber to another cylinder downstream.

With regard to claim 12, the doffing cylinder 42 of Van Doorn et al. comprises a plurality of bristles that aids cylinder 42 in removing and holding the fiber from a fiber conveying cylinder 37. Since it is well known in the fiber processing art that transferring cylinders comprised of a plurality of bristles are effective in receiving conveyed fiber, it would have been obvious to one of ordinary skill at the time the invention was made to provide bristles as taught by Van Doorn et al. to cylinder 32 in order to more effectively receive and hold the fiber onto the cylinder as the fiber is conveyed through duct 13 while permitting air to pass through the cylinder.

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Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reddick, Just and Van Doorn et al. '381 disclose a lint cleaner comprising an air stream entering the apparatus via an air duct, a revolving cylinder with fang type teeth, the air duct terminating adjacent the surface of the revolving cylinder, a means to separate the conveying air from the fibrous material and means adjacent the periphery of the revolving cylinder to cause foreign matter to be separated from the fiber.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary Welch whose telephone number is (703) 305-0451. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert, can be reached on (703) 305-1025.



**Michael A. Neas
Primary Examiner**

glw

April 22, 1999